

Sphaerobolus stellatus on Foliage Ornamentals¹

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INTRODUCTION: *Sphaerobolus stellatus* Tode: Pers., while not a plant pathogen, can be a pest to the foliage industry. The spore structures of this fungus are discharged onto plant surfaces and result in unsightly black flecks. The structures are yellow-brown to black, globular to lens or disk-shaped, and 1-2 mm in diameter. They may be found on all surfaces of the plant, but will be concentrated near the spore source. The structures are frequently mistaken for scale insects and their presence has even resulted in regulatory action which caused a delay in marketing (Birchfield *et al.* 1957). While not as obvious, the spore structures have also been found on decayed wood, greenhouse supplies (e.g., tools), and glasshouse walls.

DESCRIPTION: *S. stellatus* grows on a substrate of rotting wood, manure, or old mulch. It first appears as a white cottony mycelial layer in which tiny spheres develop (Birchfield *et al.* 1957). These spheres mature and attain a diameter of about 2 mm in 15 days.

The outer wall of the sphere splits, resulting in a star-shaped structure, and exposes a peridiole or glebal (sporogenous) mass contained in a mucilaginous mass in an inner cup. The inner cup may suddenly turn inside out as a result of a sudden osmotic expansion of the cells, projecting the peridiole for a distance of over 4 meters. The peridiole is covered with a sticky mucilage which allows it to adhere to plant surfaces. Spore forms are found within the peridiole as well as within the mucilage (Ingold 1971). The glebal mass is audibly discharged with a distinct "ping" (Ingold 1971).

Peridioles of *Sphaerobolus* may be confused with those of the Nidulariaceae, or Bird's Nest Fungi, which possess similar "flying" spore packets (Brodie 1975). The latter, however, are attached to a funicular cord, the remnants of which may be seen where the spore packet lands. The Nidulariaceae are dispersed by splashing water. *Sphaerobolus* was previously classified with the Nidulariaceae; however, it is presently placed in a separate family, the Sphaerobolaceae.

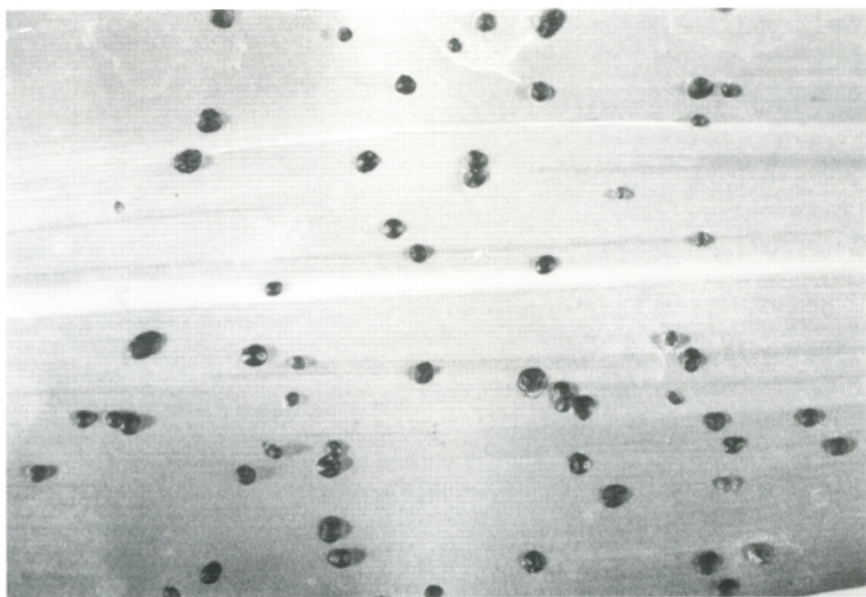


Fig. 1. Peridioles (glebal masses) of *Sphaerobolus stellatus* on a dracena leaf.
Photography credit: Jeffrey W. Lotz.

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CONTROL: No fungicide treatment is recommended at the present time. The increased number of reports of this pest may be linked to the increased use of wood products in potting media. It is recommended that these products be composted prior to incorporation into media to encourage the growth of beneficial antagonistic organisms (Hughes 1986). Covering old mulch with a yearly application of fresh mulch may lessen the problem (Rao 1991).

DETECTION: Look for black, globular to disk-shaped structures 1-2 mm in diameter on plant surfaces. These structures are harmless, but may be easily mistaken for scale insects.

LITERATURE CITED:

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